

**Amendments to the Claims**

Please cancel claims 1-14 as filed without prejudice. Please add new claims 15-36 as shown below in the List of Claims.

**List of Claims**

- 1-14. Cancelled.
15. (New) A coupled enzymatic reaction system, comprising:
- a) a cofactor-dependent enzymatic transformation of an organic compound; and
  - b) an enzymatic regeneration of the cofactor;
- wherein:
- i) said cofactor-dependent enzymatic transformation of step a) and said enzymatic regeneration of step b) are carried out in a purely aqueous solvent system in the absence of surfactant; and
  - ii) the initial concentration of substrate used for the enzymatic transformation is at least 50 mM and wherein the concentration of said substrate is higher than or equal to its solubility limit.
16. (New) The reaction system of claim 15, wherein an emulsion or a suspension is initially present in the reaction system.
17. (New) The reaction system of claim 15, wherein the initial concentration of said substrate is between 100 and 1,000 mM, and wherein the concentration of said substrate is higher than or equal to its solubility limit.
18. (New) The reaction system of claim 15, wherein said substrate is a carbonyl compound or an alcohol.
19. (New) The reaction system of claim 18, wherein said substrate is an aldehyde, unsymmetric ketone, primary alcohol, or chiral secondary alcohol.
20. (New) The reaction system of claim 15, wherein NADH or NADPH is used as a cofactor.

21. (New) The reaction system of claim 15, wherein reactions are carried out at a temperature of between 10 and 80°C.
22. (New) The reaction system of claim 15, wherein a dehydrogenase is employed as the enzyme for the cofactor-dependent enzymatic transformation of step a).
23. (New) The reaction system of claim 22, wherein said dehydrogenase is an alcohol dehydrogenase.
24. (New) The reaction system of claim 15, wherein regeneration of cofactor takes place by means of a formate dehydrogenase.
25. (New) A process for producing organic compounds comprising the reaction system of claim 15.
26. (New) The process of claim 15, wherein the reaction mixture is separated into an aqueous and an organic phase by the addition of an organic solvent, and the desired product is isolated from the organic phase.
27. (New) The reaction system of claim 16, wherein said initial substrate concentration is between 100 and 500 mM, and wherein the concentration of said substrate is higher than or equal to its solubility limit
28. (New) The reaction system of claim 27, wherein a carbonyl compound or an alcohol is employed as the substrate.
29. (New) The reaction system of claim 28, wherein said substrate is an aldehyde, an unsymmetric ketone, a primary alcohol, or a chiral secondary alcohol.
30. (New) The reaction system of claim 28, wherein NADH or NADPH is used as a cofactor.
31. (New) The reaction system of claim 30, wherein reactions are carried out at a temperature of between 20 and 40°C.
32. (New) The reaction system of claim 31, wherein a dehydrogenase is employed as the enzyme for the cofactor-dependent enzymatic transformation of step a).
33. (New) The reaction system of claim 32, wherein said dehydrogenase is an alcohol dehydrogenase.

34. (New) The reaction system of claim 33, wherein regeneration of cofactor takes place by means of a formate dehydrogenase.
35. (New) A process for producing organic compounds comprising the reaction system of claim 34.
36. (New) The process of claim 35, wherein the reaction mixture is separated into an aqueous and an organic phase by the addition of an organic solvent to the reaction mixture.